Concussion: More than ‘getting your bell rung’

SCIENCE

Before reading:

1. Explain what you know about a concussion.

2. Have you ever had a concussion? If so, how did it happen? What symptoms did you experience?

During reading:

1. What is a concussion?

2. List five symptoms of a concussion. How long can symptoms last?

3. After how many concussions is a person at risk of developing life-long problems?

4. How common are concussions?

5. Describe a neuron and axon and what they do.

6. Explain two ways in which the body protects the brain from concussions.

7. Describe two ways in which a brain and its components can be damaged by a concussion.

8. When do symptoms of axon damage show up?

9. What do Molfese’s special nets measure, and how?

10. How long after a concussion can memory be impaired? What part of the brain do scientists monitor to detect memory problems?

11. What part of the brain do scientists monitor to detect problems paying attention? Explain Molfese’s test for this.

12. Give two reasons why people sometimes don’t seek medical attention after a head injury.

13. Explain how failing to report concussion symptoms in order to stay involved in a sport can actually backfire — at least in the long run.

14. What is the STAR system?

15. How does Rowson’s team measure velocity?

16. Explain how a linear impactor tests helmets. What two key pieces of data about an impact can it provide?

After reading:

1. Do you think coaches and trainers should be required to use Molfese’s head nets on athletes? How often, and after what type of plays or injuries, should the nets be used?

1. Given what you now know about concussions, do you think it’s safe to allow children to play football and other high-impact sports and activities? Explain your answer.

2. Do you think football helmets ranked poorly by Rowson’s STAR system should be sold? Explain your answer. Would you buy a poorly ranked helmet — even if it was very inexpensive? What if it was free: Would you use it instead of buying a better helmet? Why?